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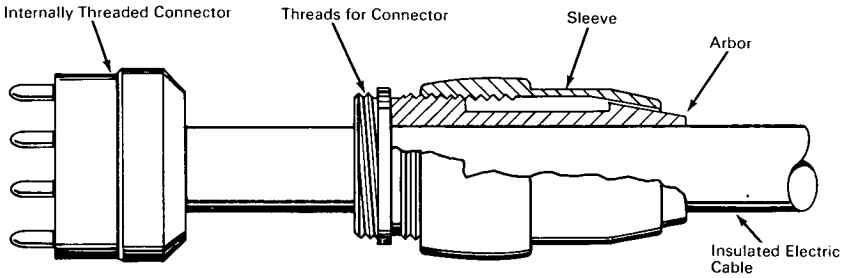
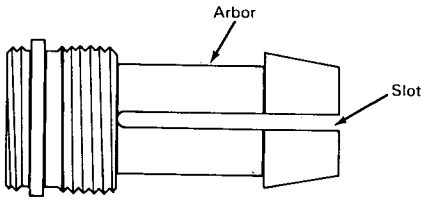
# NASA TECH BRIEF



## Electrical Cable Connector-Clamp Has Smooth Exterior Surface




**The problem:** Providing an electrical cable connector-clamp with a smooth exterior surface that can be easily gripped to enable safe and quick connect and disconnect operations in the field. Such a device was particularly required for use by an astronaut who must wear thick gloves which make manipulation difficult and are subject to damage by sharp protrusions (such as screwhead slots) on standard cable connectors.

**The solution:** A collet which clamps a portion of the cable and provides a means for connecting it to a standard electrical connector (e.g., a multipin male connector).

**How it's done:** The collet consists of a hollow arbor with two sets of male threads and an internally threaded sleeve which mates with the arbor. One set of threads on the arbor mates with the threads on a standard connector. The arbor has four equally spaced longitudinal slots to permit the collet to accommodate cables of various diameters.

In assembling the device to a cable and a standard connector in the shop, the sleeve is loosely threaded (one or two turns) on the arbor and one end of the cable is slipped through the central opening toward the threaded end of the arbor. The protruding cable conductors are then soldered to terminals on the standard connector and the latter is threaded over the arbor. The assembly is completed by turning the collet sleeve until the cable is firmly clamped in place by the arbor. The assembly, now ready for field use, provides a smooth gripping surface on the exterior of the collet.

(continued overleaf)

**Note:** Inquiries concerning this invention may be directed to:

Technology Utilization Officer
Manned Spacecraft Center
P.O. Box 1537
Houston, Texas, 77001
Reference: B65-10201

**Patent status:** NASA encourages the immediate commercial use of this invention. It is owned by NASA and inquiries about obtaining royalty-free rights for its commercial use may be made to NASA, Code AGP, Washington, D.C., 20546.

Source: North American Aviation Inc. under contract to Manned Spacecraft Center (MSC-154)